

WHAT IS CLAIMED IS:

1           1. A system for infusing a fluid into a patient,  
2 the system comprising:  
3           a volume of fluid;  
4           a temperature altering device in close proximity to  
5 the volume of fluid to heat or cool the volume of fluid to a  
6 desired temperature;  
7           a positive pressure device to place the volume of  
8 fluid under positive pressure while at the desired  
9 temperature; and  
10           a transfer member to transfer at least some of the  
11 fluid into the patient while at the desired temperature.

1           2. A system as in claim 1, wherein the temperature  
2 altering device comprises a heater, and wherein the desired  
3 temperature is within the range from about 36 ° C to about 42  
4 ° C.

1           3. A system as in claim 1, wherein the temperature  
2 altering device comprises a cooler, and wherein the desired  
3 temperature is within the range from about 0 ° C to about 35 °  
4 C.

1           4. A system as in claim 1, further comprising a  
2 reservoir for holding the volume of fluid, wherein the  
3 transfer member is operably connected to the reservoir, and  
4 further comprising a flow regulator to regulate the flow of  
5 the fluid from the reservoir and into the transfer member.

1           5. A system as in claim 4, wherein the flow  
2 regulator comprises a controller which regulates the  
3 application of pressure from the positive pressure device.

1           6. A system as in claim 5, wherein the flow  
2 regulator regulates both the rate and the volume of fluid  
3 removed from the reservoir.

1           7. A system as in claim 4, wherein the reservoir  
2 comprises a compressible bag.

1           8. A system as in claim 1, wherein the transfer  
2 member comprises a length of tubing.

1           9. A system as in claim 1, further comprising a  
2 controller to monitor the temperature of the volume of fluid  
3 and to control actuation of the temperature altering device.

1           10. A system as in claim 1, wherein the temperature  
2 altering device comprises a housing having inner walls which  
3 define a chamber, wherein the fluid is held within the  
4 chamber, and wherein the housing includes temperature altering  
5 elements to heat or cool the inner walls of the housing to  
6 alter the temperature of the fluid.

1           11. A system as in claim 10, wherein the  
2 temperature altering elements are selected from the group of  
3 elements consisting of electrical resistors, chemicals, frozen  
4 liquids, heated liquids, heated gases, radio frequency  
5 electrodes, and thermoelectric crystals.

1           12. A system as in claim 1, wherein the positive  
2 pressure device comprises a plate and a compressor for moving  
3 the plate against the volume of fluid to compress the fluid.

1           13. A system as in claim (11)<sup>2</sup> wherein the compressor  
2 is selected from the group of compressors consisting of  
3 springs, hydraulics, and solenoids.

1           ★ 14. A system as in claim 1, wherein the positive  
2 pressure device comprises a bladder and a pressure source to  
3 expand the bladder against the volume of fluid.

1           15. A system as in claim 1, wherein the volume of  
2 fluid is selected from the group of fluids consisting of  
3 blood, saline solutions, drugs, and solutes.

1           16. A method for infusing a fluid into a patient,  
2 the method comprising:  
3           providing a volume of liquid which is at an initial  
4 temperature;  
5           altering the temperature of the fluid until the  
6 fluid is at a desired temperature; and  
7           pressurizing the fluid while at the desired  
8 temperature to introduce the fluid into the patient at the  
9 desired temperature.

1           17. A method as in claim 16, further comprising  
2 regulating the pressure applied to the fluid to introduce the  
3 fluid into the patient at a predetermined rate and volume.

1           18. A method as in claim 16, further comprising  
2 flowing the pressurized liquid through a tube which is  
3 intravenously inserted to the patient to introduce the fluid  
4 into the patient.

1           19. A method as in claim 16, further comprising  
2 heating the fluid to the desired temperature which is within  
3 the range from about 36 ° C to about 42 ° C.

1           20. A method as in claim 16, further comprising  
2 cooling the fluid to the desired temperature which is within  
3 the range from about 0 ° C to about 35 ° C.

1           21. A method as in claim 16, wherein the  
2 temperature altering step comprises placing the volume of  
3 fluid into a housing having inner walls which define and  
4 chamber and heating or cooling the inner walls to alter the  
5 temperature of the fluid.

1           22. A method as in claim 16, wherein the  
2 pressurizing step comprises compressing the volume of liquid  
3 with a plate.

1           23. A method as in claim 16, wherein the  
2    pressurizing step comprises inflating a bladder which presses  
3    against the volume of fluid.

1           24. A method as in claim 16, wherein the volume of  
2    fluid is selected from the group of fluids consisting of  
3    blood, saline solutions, drugs, and solutes.

1           25. A method as in claim 16, wherein the volume of  
2    fluid is held within a compressible bag, and wherein the  
3    temperature of the fluid is altered while within the bag.